Global Political Drivers

REARMAMENT - A LASTING INVESTMENT THEME

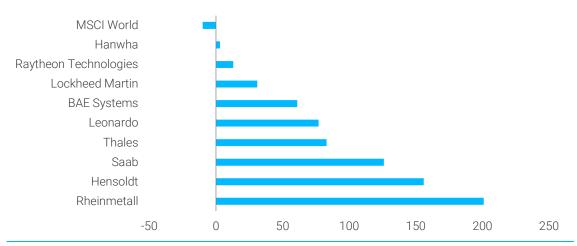
Christopher Granville

- The Ukraine war has revealed that the defence industrial base of the US and its military allies is unfit for the purpose of high-intensity territorial warfare against peer adversaries.
- No surprise here for policymakers and industry especially Chinese industry experts: but the public exposure (Biden: "we're running low [on shells]") ensures the necessary political impulse for sustained increases in defence spending warranting structural sector overweights in equity portfolios.
- Generating visibility is not the only way in which the Ukraine war drives long-term expansion in aggregate demand for military equipment. The rearmament investment theme is supported along the way by the humanitarian disaster of the war's protractedness.
- But the clincher is not the duration of the war but its legacy of persistent threat from lived experience fuelling the political driver of this theme more dependably than fluctuating Chinese threat perceptions.
- While some ramp-up imperatives like shells and drones may not move the spending needle, others like air defence are costly even before getting to the wider arms race in hypersonic missiles and nuclear modernization.
- For passive exposure purposes, the tide-lifts-all-boats prospect looks safe. On the active side, a key question is whether the prime contractors will be the main relative beneficiaries of incremental demand or offer less upside than smaller players. The answer may depend on investment horizons, with diversification more likely to outperform over longer holding periods.

Shell shortage

A smart 'hindsight' trade in the volatile equity markets of the past 18 months would have been to hedge the early 2022 "no-Russian invasion" consensus (which we were part of) with a long position in leading defence sector stocks. The chart below offers a reminder of their well-known outperformance since then. Eighteen months on seems a good time to consider whether this is just a 'trade' – in the sense of outperformance giving way in time to mean reversion – or deserves to be treated for portfolio strategy purposes as a fully-fledged investment theme.





Source: Bloomberg

Adversarial geopolitics centered on the US-China rivalry might be reckoned a high-level rationale for structural overweighting of defence stocks in equity portfolios – if only as a hedge against the periodic stagflation shocks threatened by this secular escalation of geopolitical tension. The more tangible driver of the war in Ukraine now underpins this investment thesis – and, by way of a more specific reason for the timing of this analysis, is now casting brighter light on this question of whether the rearmament theme has staying power.

The past eight weeks of intense Ukrainian counter-offensive has brought the rearmament urgency into sharp public view. President Biden supplied the highlight by admitting in a CNN interview on 9 July that "we're running low [on 155mm calibre artillery shells]". The purpose of this admission was to justify the decision to supply Ukraine's artillery ammunition needs from the US stockpile of 'cluster' shells. US National Security Advisor Jake Sullivan deflected criticism of this controversial decision by presenting it as a stopgap – until next spring, by which time he said the US will have ramped up its annual production of 'normal' high explosive shells from the pre-Ukraine war level of around 175,000. The stated goal is to quintuple production of these shells by 2028. Speaking at the annual Aspen Security Forum in mid-July, Sullivan said that the first half-hour of his working day in the White House has recently been devoted to the 155mm shell supply problem.

In contrast to its usually dominant position in all military equipment production, the US is a relatively small producer of these shells. Domestic US critics of defence procurement (such as the <u>Quincy Institute</u> would say this reflects the disinterest of "Pentagon profiteers" in low-tech, low-margin munitions manufacture compared to the development of advanced platforms that absorb the bulk of the vast procurement budget. Much criticism along these lines focuses on the cost of the F-35 fighter plane, which was the main contributor to <u>Lockheed Martin's latest</u>

<u>quarterly earnings</u> uptick. This raises the question of whether the response to the shell shortage is a valid proxy for wider defence spending, hence sector company earnings. We return to that question in the last section of this note. For now, the focus on basic munitions production is worth exploring further because of its importance for the Ukraine war which, in turn, will have a major influence on long-term defence procurement across the board.

War in Ukraine: the artillery shell balance

Depletion of pre-war stockpiles spells ramp-up in lagging current production

		Consensus estimate of daily fire rate in war to date	Estimated current annual production (daily equivalent)
Russia	Average	10,000-20,000	7,500 – 9,500*
	Intensive	>50,000	
Ukraine/NATO		5,000-7,500	
	of which	2,500 'NATO' 155mm shells	2,700

^{*}Lower to upper range spread reflects, respectively, Western and Russian defence analysts' estimates

Source: RUSI, simplicius76.substack.com

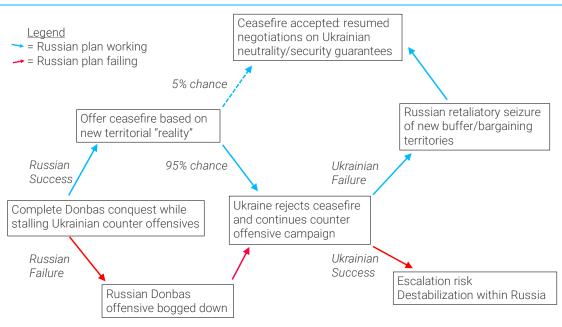
Driver outlives the war

When looking at the Ukraine war as a risk factor for the global economy and overall stability, our focus has been on duration. The longer the war lasts, the higher the risk – with peak risk peak risk likely to come at the stage when one or other side faces collapse. The same analytical focus may at first seem equally central to the rearmament theme, as protracted fighting will sustain increased defence spending.

In this perspective, duration analysis looks bullish for the theme (although horrible in human terms). Our latest update starts from the unchanged key assumption that sky-high stakes program the belligerents to fight on for as long as they can rather than cut their losses and compromise. The conclusion is that none of the three ways in which either side could lose the ability or willingness to fight on has a realistic chance of playing out during the next 12 months. The most plausible collapse mechanism – a loss of morale at the front and in the rear (wider society) – would most likely require a lot longer.

As for another of the hypothetical collapse mechanisms – the one relating directly to the rearmament theme – it is hard to envisage any realistic timescale. This would involve one side outpacing the other in arms supplies or, conversely, encountering insurmountable supply problems. The artillery shell position shown in the above table remains a good proxy for the wider picture.

On the Western side, the recent cluster munitions episode demonstrates that temporary workarounds will be found pending easing of structural production bottlenecks. This problem stems at root from the post-Cold War shrinkage of defence manufacturing capacity to the needs of expeditionary operations as opposed to the present reality of high-intensity territorial warfare between advanced peer belligerents. In such warfare, artillery superiority is a necessary (if not sufficient) condition for reaching military goals. The US alliance has ample resources to reduce the present Russian lead in this area. US allies in the Asia-Pacific region (notably South Korea and Australia) are set to build further on their already notable contributions: and war imperatives will end up forging the political will to achieve a common NATO standard in 155mm shells similar to what already exists in small arms munitions.



Russia's apparent war plan for Year 2 of the war

Source: TS Lombard

On the Russian side, the artillery preponderance required to achieve even the limited goals on a conservative reading of President Putin's recent public statements (as represented in the flowchart above) would require a substantial further expansion of production capacity. Even some pro-Russian military analysts are sceptical. This example estimates that even with a near doubling of production capacity, it may take the Russian general staff until 2025 to have rebuilt depleted stockpiles sufficiently to support an intense two-month offensive against the remainder of the Donbas. The assumption here is that such an offensive might require a firing rate of over 50,000 shells a day – equivalent to a full year of present wartime production. As for the downside risk here for Russia, fiscal funding of expanded weapons production may end up causing macroeconomic instability. But if that proved to be the route to collapse, then it would more plausibly lie through the impact on society (inflationary impoverishment undermining confidence in the regime) rather than physical interruptions in munitions manufacture.

Not duration after all

This analysis points to what may seem a surprising conclusion: the duration of the war, so important for general risk factors, turns out not to be the key driver of the rearmament theme.

To be sure, the dire prospect of the war dragging out for a few more years (as opposed to months, let alone the remaining weeks of the present summer campaigning season) will support the theme. Moreover, and as just argued, among the possible routes to a ceasefire, an absolute or relative failure of arms production seems much less likely than revulsion at the human cost of the war on the part of both combatants and wider society. In other words, the directly war-related part of defence procurement will continue expanding until the bitter end.

Except to say that such an end will not come at all soon, other predictions are futile. But since any scenario analysis requires initial assumptions, let's take the conservative analogy of the four full years needed for WW1 to end with the exhaustion of one of the belligerents (Germany). That happens to be the timescale that European manufacturers of munitions and their components, such as Slovakia's MSM or Czechia's Explosia, estimate will be needed to build new production

lines amidst persistent supply-chain bottlenecks. Although the government procurement demand signal will remain supportive while such new capacity is being built against the backdrop of the continuing Ukraine war, defence sector companies remain exposed to the risk of that demand being pulled when a ceasefire or armistice is finally agreed. At that point, the public funding priority will switch towards post-conflict reconstruction in Ukraine. Media coverage of this topic is littered with quotes from senior defence sector managers foreboding this threat to their ROIs.

More decisive will be the legacy of the Ukraine war in the sense of the geopolitical environment emerging from the war and sustained by the experience of the war. That longer-term environment will remain favourable for 'rearmament' demand. This suggests an attractive risk-reward opportunity for defence companies investing in risk-based capacity expansion (ie. even if not fully underwritten by long-term contracts). Our conviction on this core conclusion is all the stronger for it not depending on elaborate scenario analysis. Sufficient support comes instead from a simpler process of elimination involving two questions: what outcomes of the Ukraine war might reverse expanding demand for military equipment, and how likely are such outcomes?

Eliminating peaceful scenarios

One 'new peace dividend' outcome that can be eliminated beyond doubt is a repeat of '1945'.

That is, the enemy of the US and its allies is utterly defeated and is then absorbed politically and militarily into the US fold. In that purely hypothetical case, incidentally facilitating the containment of a now more isolated China, rearmament demand would wilt. To return to reality: if the world survived the threat of nuclear escalation from Russia as its forces were driven out of Ukrainian territory (especially from Crimea), that same threat would rule out any attempt to occupy Russia and install a US-friendly government.

Western optimists might still hope for a pro-Western government to emerge organically in Russia from the humiliation of defeat. In the resulting post-Putin power struggle, however, leaders of the military and security agencies would initially have the weapons and control of state resources which – at least until the global energy transition had terminally undercut global oil demand – would suffice to keep them in power. The US alliance system would face a bitter and resentful Russia ever more closely aligned with (dependent on) China. The rearmament theme would thrive.

Turning to the opposite pole of the scenario spectrum where Russia emerges from the war with the upper hand (for example, in secure control of some Ukrainian territory in addition to the regions previously occupied in 2014), a **brake on rearmament can be ruled out with equal confidence**. For in that case, the Russian military threat to Europe would appear greater than ever

Risks and refinements

The case for a structural overweight to defence-related companies in equity portfolios is based on the simple premise of long-term expansion of aggregate demand. On this view, the rising trend of defence spending shown in the chart below will become inexorable. Clinching the case requires considering various qualifications and possible flaws comprising the 'risk to the view'.

Global defence spending (in constant 2021 USD bn) 2300 2100 1900 1700 1500 1100 Post-Cold War 900 "peace dividend"

1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022

Source: SIPRI. *Nominal USD

700

1. Russia's war clinches the Chinese threat

The focus of this analysis on the Ukraine war as the key political driver for this investment case may seem moot. Surely the challenge of China, dwarfing that of Russia, would alone suffice to underwrite the rearmament theme? The probable answer is 'yes': but the factual experience of the war in Ukraine – and crucially, as we have argued, the war's aftermath – removes the "probably" from that answer.

In the counter-factual scenario of no Ukraine war, the US security establishment and the engaged sections of the political class could have been expected to continue 'banging the drum' for increased defence spending to counter the threat from China. The House of Representatives' hawkish Select Committee on "Strategic Competition between the US and the Chinese Communist Party" hardly needed Russian aggression to run scary war games on a US-China military confrontation over Taiwan, and the RAND Corporation could in any case be expected to recommend enhanced deterrence and larger munitions stockpiles as in its newly published Inflection Point report on the "insolvency" of the US defence strategy and posture.

Yet scenarios, whether counter-factual or forward-looking, would always provide a weaker political impulse than lived experience. Take the example of Taiwan-related risk. Long-run easing of that risk now seems like a hard case to make; but temporary thaws might blunt or pause the negative trend. As argued in a recent note in our Global Political Drivers series, domestic politics in Taiwan is one plausible source of such a pause, while the Biden administration already switches periodically into détente mode. The stress on weapons stockpiles and production caused by the Ukraine war is, by contrast, for real. Years of capital intense investment will be needed to address the revealed weakness in the US military alliance system's defence industrial base. In political terms, the near certainty of a persistent post-war threat from Russia will underwrite this imperative with more dependable permanence than fluctuating perceptions of the threat from China.

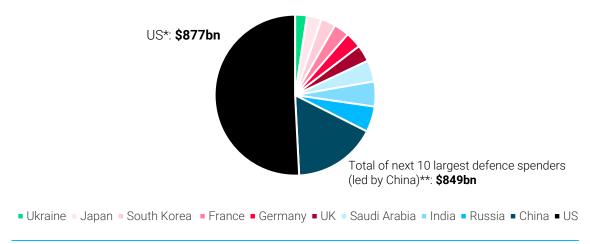
The demand signal required for capacity expansion in the West's military industrial complex is already forming. The Biden administration's defence budget proposals for the next fiscal year envisage an extension of multi-year contracts, previously only used for the largest and most complex items like warplanes and naval ships, to munitions and missiles. BAE systems began last January a 15-year supply contract from the UK government for artillery shells and various other munitions. But this effect is perhaps most relevant of all for Europe, where, in general,

particularly sharp crises are needed to overcome inertia. Without the Russian invasion of Ukraine, Germany and others would have continued to pay only lip service to increasing defence spending to the NATO target of 2% of GDP. The unrealized Chinese threat to Taiwan would not have sufficed to bring about the real increases in spending that are already visible − including at the EU level. Just as it took the Covid shock to remove the logjam to 'fiscal federalism' in the EU (via the creation of the NextGen EU Fund), so now the Ukraine war has made it politically possible for the €4.7bn resources of the European Peace Fund to be diverted to funding arms supplies to Ukraine and for the EU Commission to have launched a €500mn programme for joint artillery shell and missile procurement (similar to the Covid vaccine campaign).

2. Incremental spend challenge

The prospect of steady increases in defence spending might be challenged from a couple of perspectives. The first we have already touched on: some of the most glaring shortages and capacity pinches exposed by the Ukraine war are in relatively inexpensive areas of procurement such as artillery shells, where ramping up may have little effect on absolute spending levels. In the political 'guns vs butter' debate, the 'pro-butter' camp might find an additional argument here. On this view, America's already preponderant defence spending (see chart below) need not be yet further increased but merely re-directed towards neglected and affordable priorities highlighted by the war in Ukraine.

2022 defence spending: US dwarfs all others - but cash alone is not enough



Source: SIPRI military expenditure database 2023. *Fiscal year to Sept 2022. ** Calendar 2022, at market exchange rates

There are three specific reasons for supposing that the 'pro-guns' side will win this political debate, not only in the US itself but also in Europe and the wider alliance system. By 'specific', we mean in addition to the generic counterargument to the debate's zero-sum assumption – ie. the argument that guns also produce butter in the form of solid domestic industrial employment sheltered from the hollowing-out effect of globalization.

• Much of the equipment in line for ramped-up production in the light of the Ukraine is more sophisticated and costly than howitzer shells or drones. One example is antitank guided missiles like Javelins, which the Ukrainian armed forces have consumed faster than the US can produce or supply, and which (as in the cluster munitions story) have had to be supplemented in the Ukrainian theatre with supplies of older and inferior US kit (TOW missiles). The core exhibit here, however, is air defence and guided missiles, where Russian superiority (perhaps in quality, certainty in quantity), has proved almost as important in live combat as artillery munitions. The kit involved here is wide-ranging, from short-range



- shoulder-launched interceptors (e.g. 'MANPAD' surface-to-air missiles) to the high-end and costly 'Patriot' systems along with various missiles and rockets.
- One such high-end item hypersonic missiles is relevant to the wider arms race. Any arms race is expensive entailing as it does the challenge of reaching new technological frontiers and producing the resulting innovations at scale. Associated spending increases will be faster on the side that is catching up. In the case of hypersonic missile technology, that means the US i.e. the relevant source of demand for the rearmament investment theme. Another such area is the modernization of the US nuclear 'triad' (bombers, ground- and submarine-launched missiles) in response to Russia's modernization of its strategic nuclear forces since the US unilateral withdrawal from the Anti-Ballistic Missile Treaty in 2002.
- The final and perhaps most important source of reliable increases in defence spending stems not even from the urgent need for more military equipment as such. After all, present wardepleted stockpiles will eventually be replenished and expanded, following which demand would logically plateau unless live armed conflicts escalate or new ones break out. What anchors the rearmament theme as opposed to the theme being exposed to the vagaries of war scenarios is the precondition for adequate western rearmament in the new environment of great power competition. This pre-condition is the radical expansion of military industrial capacity. Noah Smith nails this point with a historical contrast. On the eve of Pearl Harbour, the US could get away with being unprepared as its industrial capacity exceeded that of any other country, enabling it to outstrip adversaries in ramping up arms production; but now that advantage belongs to China. The political imperative to expand the industrial case will drive long-run capital intensive investment.

3. Relative winners: the "primes" question

In a macro perspective, rearmament contributes to the secular theme of a higher-pressure economy (higher inflation and rates, stronger real growth), first and foremost in the US. Buoyant demand for military equipment and investment in the required new production capacity may make defence the second most important single-sector contributor to this theme after the energy transition. The test for whether this is also a secular equity investment theme is tougher, since the demand expansion from government procurement would in that case have to hold up steadily and single-handedly as opposed to just contributing on balance to a macro trend.

Our conclusion that this test will be reliably passed leads on to the usual investing menu – spanning passive exposure to a broad basket of defence sector stocks (on the rising-tide-lifts-all-boats rationale) to a more active search for relative winners. While this active portfolio management challenge lies beyond the scope of our Global Political Drivers series, one aspect depends heavily on top-down policy drivers.

This is the question of whether the share prices of the huge 'prime' contractors will benefit more than smaller companies. The five US 'primes' that emerged from the sector's post-Cold War consolidation (Raytheon, Lockheed Martin, Northrop Grumman, Boeing and General Dynamics) have European counterparts like BAE Systems, Airbus and Rheinmetall, though some other large players in Europe remain fully state owned. Comprehensive industry information is provided in the GlobalData Intelligence Centre for Aerospace, Defence & Space (a taster can be viewed here).

The answer to this question may hinge on investors' timelines. The longer the investment horizon, the stronger the case for exposure to more specialist suppliers and start-ups that are being supported by various Pentagon policy initiatives that include provisions to prevent the sector behemoths stifling competitive innovation. Some large contractors may also lose out from

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the wartime spur to standardize NATO equipment such as 155mm shells. In the shorter run, however, the path of least political resistance – increasingly vocal criticism of defence spending 'boondoggles' notwithstanding – will be to funnel more hefty contracts in the direction of the 'primes'. The chair of the House Select Committee on China Mike Gallagher was quoted by *Politico* last month as saying that the Pentagon should offer contractors such as Lockheed Martin a slew of new multi-year contracts to produce priority missile equipment for deterring a Chinese attack on Taiwan. For now, then, the prime contractors remain well placed to reap rewards, even if their position as relative winners may prove less robust in the end than their counterparts in Big Tech riding the Al wave.

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